



1635

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.: 09/963,827
Applicant: Sullenger, et al.
Filed: September 26, 2001
TC/A.AU.: 1635
Examiner: Sean McGarry
Title: RNA Aptamers and Methods of Identifying the Same
Docket No.: 10815.105005
Customer No.: 20786

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

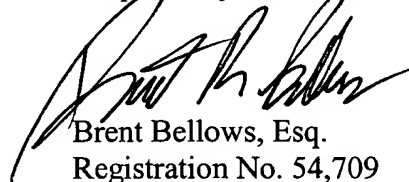
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Pursuant to the duty of disclosure under 37 CFR §§ 1.56, 1.97 and 1.98, Applicants cite the publications listed on the accompanying PTO-1449. Copies of listed ex-US publications and scientific references are enclosed.

The Commissioner is hereby authorized to charge any requisite fees to Deposit Account No. 11-0980.

Respectfully submitted,


Brent Bellows, Esq.
Registration No. 54,709

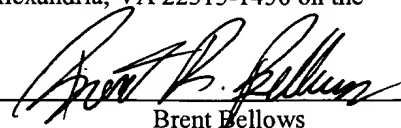
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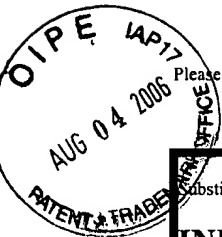
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Brent Bellows



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PTO/SB/08A (08-00)

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Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT					
(use as many sheets as necessary)					
				Application Number	09/963,827
				Filing Date	September 26, 2001
				First Named Inventor	Sullenger, et al.
				Group Art Unit	1645
				Examiner Name	Sean McGarry
				Attorney Docket Number	10815.105005
Sheet	1	of	6		

U.S. PATENT DOCUMENTS						
Examiner Initials *	Cite No. 1	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages/Relevant Figures Appear
		Number	Kind Code 2 (if known)			
	AA	5270163		Gold et al.	12-1993	
	AB	5532130		Alul	7-1996	
	AC	5534408		Green et al.	7-1996	
	AD	5552391		Coutts et al.	9-1996	
	AE	5594121		Froehler et al.	1-1997	
	AF	5606047		Coutts, et al.	2-19997	
	AG	5645985		Froehler et al.	7-1997	
	AH	5681702		Collins et al.	10-1997	
	AI	5750729		Alexander, et al.	5-1998	
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	AK	5780449		Bracht et al.	7-1998	
	AL	5780610		Collins et al.	7-1998	
	AM	5792608		Swaminathan et al.	8-1998	
	AN	5807718		Joyce et al	9-1998	
	AO	5,817,781		Swaminathan et al.	10-1998	

Examiner Signature		Date Considered	
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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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				1645	
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				Sean McGarry	
Sheet 2 of 6				Attorney Docket Number	
				10815.105005	

	BA	5,830,653		Froehler et al.	11-1998	
	BB	5,839,443		Rose	11-24-1998	
	BC	5,840,867		Toole et al.	11-1998	
	BD	5,879,917		Essigmann et al.	3-1999	
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	BG	5,891,689		Takle et al.	4-1999	
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	BT	6,127,173		Eckstein et al.	10-2000	
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				First Named Inventor	Sullenger, et al.
				Group Art Unit	1645
				Examiner Name	Sean McGarry
Sheet	3	of	6	Attorney Docket Number	10815.105005

	CA	6,147,204		Gold et al.	11-2000	
	CB	6,150,461		Takei et al.	11-2000	
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	CM	6,391,300		Rose	5-21-2002	

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Examiner Initials *	Cite No.	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document DD-MM-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1					
		Office ³ Number	Kind Code ²			
		(if known)				
	CN	WO	94/006811	Integrated DNA Tech., Inc.	03-31-1994	
Examiner Signature					Date Considered	

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				Sullenger, et al.	
				Group Art Unit	
				1645	
				Examiner Name	
				Sean McGarry	
Sheet 4 of 6				Attorney Docket Number	
				10815.105005	

	DA	WO	97/042317		T Cell Sciences, Inc.	11-13-1997	
	DB	WO	99/033971		MCG Research	07-08-1999	
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	DF	WO	00/024912		Children's Med. Center	05-04-2000	
	DG	WO	00/042063		Deutsches Krebsforschungsz.	07-20-2000	
	DH	WO	00/042064		Deutsches Krebsforschungsz.	08-20-2000	
	DI	WO	04/011680		Archemix	02-05-2004	
	DJ	WO	04/014844		Transtech Pharma, Inc	02-19-2004	
	DK	WO	04/047742		Archemix	06-10-2004	
	DL	WO	04/050899		Archemix	06-17-2004	
	DM	WO	05/010150		Archemix	02-03-2005	
	DN	WO	05/014533		Transtech Pharma, Inc	02-17-2005	
	DO	WO	05/052121		Archemix	06-09-2005	
	DP	WO	05/084412		Archemix	09-15-2005	
	DQ	WO	05/111238		Archemix	11-24-2005	
	DR	WO	06/029258		Archemix	03-16-2006	
	DS	WO	06/033854		Archemix	03-30-2006	
	DT	EPO	1 026 243		Japan Science & Tech. Ag.	8-13-2000	
	DU	JP	11127864		Japan Science & Tech. Ag.	05-18-1999	

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				Attorney Docket Number	10815.105005
Sheet	5	of	6		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS		
Examiner Initials *	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	EA	Agrawal et al. Mol. Med. Today (2000) 6:72-81
	EB	Aldaz-Caoll et al. <i>Apical loop-internal loop interactions: a new RNA-RNA recognition motif identified through in vitro selection against RNA hairpins of the hepatitis C virus mRNA</i> Biochemistry 41:5883-5893 (2002) (abst)
	EC	Biesecket et al. <i>Derivation of RNA aptamer inhibitors of human complement C5'</i> Immunopharmacology 42:219-230 (1999) (abst)
	ED	Boiziau et al. <i>DNA aptamers selected against the HIV-1 trans-activation responsive RNA element form RNA-DNA kissing complexes</i> J Biol Chem 274:12730-12737 (1999)
	EE	Callas et al. <i>Comparative pharmacology of site directed antithrombin agents Implication in drug development</i> Thrombosis and haemostasis (1995) 74:473-481(abst)
	EF	Charlton et al. <i>IN vivo imaging of inflammation using an aptamer inhibitor of human neutrophil elastase</i> CChem. Biol. 4:809-816 (1997) (abst)
	EG	Collin et al. <i>NMR characterization of a kissing complex formed between the TAR RNA element of HIV-1 and a DNA aptamer</i> Nucl. Ac. Rsch. 28:3386-3391 (2000)
	EH	Darfeuille et al. <i>RNA and N3'-P5' kissing aptamers targeted to the trans-activation responsive (TAR) RNA of the human immunodeficiency virus-1</i> Nucs Nuc. Nuc. Ac. 20:441-449 (2001) (abst.)
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Sheet	6	of	6		

FA	Duconge et al. <i>Is closing "GA PAI" a rule for stable loop-loop RNA complexes?</i> J. Biol. Chem 275:21287-21294 (2000)
FB	Gal et al. <i>Selection of a RNA aptamer that binds to human activated protein C and inhibits its protease function</i> European J. Biochem. 252:553-562 (1998) (abst)
FC	Hwang et al. <i>Inhibition of gene expression in human cells through small molecule -RNA interactions</i> PNAS 96:12977 (1999)
FD	Jen et al. (2000) Stem Cells 18:307-319
FE	Leva et al. <i>GnRH binding RNA and DNA Spiegelmers A novel approach toward GnRH antagonism</i> Chemistry & Biology 8:351-359 (2002)
FF	Li et al. <i>A novel nucleotide based thrombin inhibitor inhibits clot bound thrombin and reduces arterial platelet thrombus formation</i> Blood 83:677-682 (1994) (abst)
FG	Opalinska, et al. Nature Reviews Drug Discovery (2002) 1:503-514
FH	Padmanabhan et al. <i>The structure of alpha thrombin inhibited by a 15mer single stranded DNA aptamer</i> JBC (1993) (abst) 268:17651-17654
FI	Rusconi, et al. <i>RNA aptamers as reversible antagonists of coagulation Factor IXa</i> Nature (2002) 419:90-94
FJ	Shaw et al. <i>A novel oligodeoxynucleotide inhibitor of thrombin 1. In vitro metabolic stability in plasma and serum</i> Pharm. Rsch. 12:1937-1942 (1995) (abst)
FK	Tasset et al. <i>Oligonucleotide inhibitors of human thrombin that bind distinct epitopes</i> J. Molecular Biol. 272:688-698 (1997) (abst)
FL	Tinevez et al. <i>Selective inhibition of cell-free translation by oligonucleotides targeted to a mRNA hairpin structure</i> Nucl. Ac. Rsch. (1998) 26:2273-2278

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GA	Tucker, et al. <i>Detection and plasma pharmacokinetics of an anti-vascular endothelial growth factor oligonucleotide aptamer in (NX1838) rhesus monkeys</i> J. Chromatography 732:203-212 (1999)
GB	Wahlestedt, et al. <i>Potent and nontoxic antisense oligonucleotides containing locked nucleic acids</i> PNAS (2000) 97:5633-5638
GC	Williams et al. <i>Bioactive and nuclease resistant L-DNA ligand of vasopressin</i> PNAS (1997) 94:11285-11290

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